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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,302	06/13/2001	Patrick L. Connor	42390P11642	6775

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EXAMINER

ENGLAND, DAVID E

ART UNIT PAPER NUMBER

2143

DATE MAILED: 11/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/881,302	Applicant(s) CONNOR, PATRICK L.	
	Examiner David E. England	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/13/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 19 are presented for examination.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “adding said packet to a packet array” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “indicating said packet array to a protocol stack based on said resource state” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “indicating said packet array to said protocol stack if said resource state indicator is set to low” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “packet array has a length of 1-N” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the packet array construction module

Art Unit: 2143

truncates said packet array if said explicit resource status for a packet is set to low” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 2143

7. Claims 5, 9 and 14 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

8. The limitation of “1-N” is not specifically described in a way for one to properly interpret what N stands for in the specification.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1 – 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Applicant states in the claim language “adding said packet to a packet array”. This limitation is unclear since a packet is an array, unless the Applicant means to call this an “array of packets”. Applicant is asked to amend the claim language to be more specific or point out specific sections in the specification. Doing so could overcome the rejection.

12. Applicant states in the independent claims 1 and 10 a resource state for said packet. In the dependent claims the Applicant also discloses a resource state for said device driver, but then does not distinguish between the two different resource states. Applicant is asked to amend the claim language to distinguish between the two different resource states.

13. All other claims are rejected for their dependencies to the claims mentioned above.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1, 2, 6 – 8, 10, 11 and 15 – 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hausman et al. U.S. Patent No. 5872920 (hereinafter Hausman).

16. Referencing claim 1, as closely interpreted by the Examiner, Hausman teaches a method to manage a packet array, comprising:

17. receiving a packet by a device driver, (e.g. col. 1, lines 39 – 58);
18. setting a resource state for said packet, (e.g. col. 5, lines 44 – 58);
19. adding said packet to a packet array, (e.g. col. 5, lines 44 – 58); and
20. indicating said packet array to a protocol stack based on said resource state, (e.g. col. 6, lines 18 – 46, “...*software protocol (driver)*...”).

21. Referencing claim 2, as closely interpreted by the Examiner, Hausman teaches determining a resource state for said device driver, (e.g. col. 5, lines 44 – 58);

Art Unit: 2143

22. comparing said resource state to a predetermined threshold, (e.g. col. 6, lines 18 – 46);
and
23. setting a resource state indicator in accordance with said comparison, (e.g. col. 5, lines 44 – 59).
24. Referencing claim 6, as closely interpreted by the Examiner, Hausman teaches said packet array is stored in a first buffer, (e.g. col. 7, lines 1 – 13).
25. Referencing claim 7, as closely interpreted by the Examiner, Hausman teaches said resource state indicator is an explicit resource state indicator, (e.g. col. 5, lines 44 – 58).
26. Referencing claim 8, as closely interpreted by the Examiner, Hausman teaches receiving said packet array, (e.g. col. 6, lines 54 – 67);
27. determining an implicit resource state for each packet in said packet array, (e.g. col. 6, lines 54 – 67); and
28. copying each packet having an implicit resource state below a predetermined threshold from said first buffer to a second buffer, (e.g. col. 6, lines 54 – 67).
29. Claims 10, 11 and 15 – 17 are rejected for similar reasons stated above.

Claim Rejections - 35 USC § 103

Art Unit: 2143

30. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

31. Claims 3, 4, 12, 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hausman (5872920) in view of Shinohara (5901139).

32. As per claim 3, as closely interpreted by the Examiner, Hausman does not specifically teach said setting said resource state indicator in accordance with said comparison comprises:

33. setting said resource state indicator to normal if said resource state is above or equal to said predetermined threshold; and

34. setting said resource state indicator to low if said resource state is below said predetermined threshold.

35. Shinohara teaches said setting said resource state indicator in accordance with said comparison comprises:

36. setting said resource state indicator to normal if said resource state is above or equal to said predetermined threshold, (e.g. col. 7, lines 4 – 27); and

37. setting said resource state indicator to low if said resource state is below said predetermined threshold, (e.g. col. 7, lines 4 – 27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Shinohara with Hausman because setting up indications in response to threshold requirements aids in determining of specific buffers or network devices can handle the amount of data traversing the network.

38. As per claim 4, as closely interpreted by the Examiner, Hausman teaches said indicating comprises indicating said packet array to said protocol stack if said resource state indicator is set to low, (e.g. col. 4, lines 18 – 45 & col. 8, lines 42 – 67).

39. Claims 12, 13 and 18 are rejected for similar reasons as stated above.

40. Claims 5, 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hausman (5872920) in view of Shinohara (5901139) in further view of Fichou et al. (6765873) (hereinafter Fichou).

41. As per claim 5, as closely interpreted by the Examiner, Hausman and Shinohara do not specifically teach said packet array has a length of 1-N.

42. Fichou teaches said packet array has a length of 1-N, (e.g. col. 10, lines 34 – 46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Fichou with the combine system of Hausman and Shinohara because it is well known in the computer art that system that utilize a binary or hexadecimal architecture that how ever many bit are in a packet, they are number or “kept track” by starting with the number 0 as opposed to 1.

43. As per claim 9, as closely interpreted by the Examiner, Hausman teaches

44. retrieving each packet in order from said packet array, (e.g. col. 6, lines 54 – 67);

Art Unit: 2143

45. determining that said implicit resource state is normal for each packet if said explicit resource state indicator is normal, (e.g. col. 6, lines 54 – 67); and

46. determining that said implicit resource state is low for any remaining packets in said packet array if said explicit resource state indicator is low, (e.g. col. 6, lines 54 – 67), but does not specifically teach said packets are ordered from 1-N in said packet array, and determining said implicit resource state.

47. Fichou teaches said packets are ordered from 1-N in said packet array, and determining said implicit resource state, (e.g. col. 10, lines 34 – 46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Fichou with the combine system of Hausman and Shinohara because of similar reasons stated above.

48. Claim 14 is rejected for similar reasons as stated above.

49. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hausman (5872920) in view of Shinohara (5901139) in further view of Kalkunte (6009104).

50. As per claim 19, as closely interpreted by the Examiner, Hausman and Shinohara do not specifically teach said packet array construction module truncates said packet array if said explicit resource status for a packet is set to low.

51. Kalkunte teaches said packet array construction module truncates said packet array if said explicit resource status for a packet is set to low, (e.g. col. 6, lines 5 – 18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine

Kalkunte with the combine system of Hausman and Shinohara because it would be more efficient to truncate a packet array to save buffer space in a system.

Conclusion

52. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

53. a. Toshitani et al. U.S. Patent No. 6775724 discloses Method and apparatus for synchronization control for various frequencies.

54. b. Caldara et al. U.S. Patent No. 5822540 discloses Method and apparatus for discarding frames in a communications device.

55. c. Boyd et al. U.S. Patent No. 6735647 discloses Data reordering mechanism for high performance networks.

56. d. Hansen et al. U.S. Patent No. 6006318 discloses General purpose, dynamic partitioning, programmable media processor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 571-272-3912. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

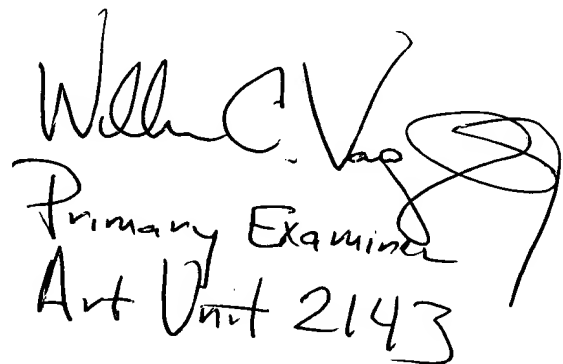
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571)272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2143

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David E. England
Examiner
Art Unit 2143

De



William C. Vago
Primary Examiner
Art Unit 2143